

 **EXPEDITE** 

INFORMATION REPORT INFORMATION REPORT

CENTRAL INTELLIGENCE AGENCY

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S-E-C-R-E-T

50X1-HUM

COUNTRY USSR (Dnepropetrovsk Oblast)

REPORT

SUBJECT The DAZ at Dnepropetrovsk
(Dnepropetrovskiy Avto Zavod)

DATE DISTR. 24 March 1961

(Facilities, Tractor production, manpower,
presence of AF officers, security, high
tower building, unusual noises)

NO. PAGES 2

REFERENCES

DATE OF
INFO.PLACE &
DATE ACQ.

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SOURCE EVALUATIONS ARE DEFINITIVE. APPRAISAL OF CONTENT IS TENTATIVE.

2. In 1950 or 1951 the factory was converted to military production. In 1948 50X1-HUM it was making prototype models of "Ukrainets" trucks, with engines supplied from Moscow; just before conversion, it started series production of these trucks. When conversion actually began, only about seven or eight "Ukrainets" had been produced; DAZ took these over for its use, and truck production ceased.

3. Conversion was completed over a period of, roughly, two or three years. During this period, new machinery, such as lathes and milling machines, was brought in from the Moscow factories where it had been made.

4. Production of Belarus tractors began about one year after production of the "Ukrainets" trucks had stopped. At first, only prototypes were made in order to determine what jigs and tools would have to be set up for subsequent series production. The "Belarus" was quite a small agricultural-type tractor with two small wheels in front and two larger ones in back.

the whole tractor, including the engine, was built at the DAZ.

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they were destined mainly for kolhkozy. By the end of 1952 or the beginning of 1953 these tractors were in series production, and

they were turning out at the rate of 300 per week. Sometimes, five or six trucks arrived to collect one finished tractor each, and groups of tractors were also driven away from the factory under their own steam

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NOFORN/CONTINUED CONTROL

STATE	X	ARMY	X	NAVY	X	AIR	X	NSA	X	FBI	X	NIC	X	OCR	X
														ORR/EV	X

(Note: Washington distribution indicated by "X"; Field distribution by "#".)

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IMMEDIATELY AFTER USE

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toward Dnepropetrovsk, presumably for shipment elsewhere.

5.

6.

up to the time of conversion, the DAZ had between 15,000 and 20,000 workers. After conversion the number increased greatly, until in 1959 there were between 30,000 and 40,000 employees. About 500 or 600 people worked in the instrument workshop, in two shifts.

7.

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8.

Security was strict both before and after conversion. Civilian guards were used up to the time of conversion; after that, military guards took over. They wore khaki uniforms and red cap bands and carried rifles. There were guard towers along the north and east walls of the plant, and there were also towers along the other two sides. When workers entered the gate (at No. 8 on Appendix A), their passes were checked by the guards. The passes contained the name of the worker, his photograph, and the number of his workshop. Each worker could enter only the shop corresponding to the number on his pass.

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9.

The chief engineer at the DAZ was Gregoriyev, who became temporary director just after conversion but who left probably not more than a few months afterwards. The new director was Smirnov, he continued in this post until at least the summer of 1959.

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10.

The report gives a rather detailed description of the instrument workshop, particularly the precision-drilling section. It also describes other DAZ buildings as well as buildings outside the plant. Appendix A gives a layout of the DAZ and a key to the layout. Appendix B is a diagram, with key, of the building which housed the instrument workshop. Appendix C is a sketch of three hand cutting tools for lathe operators in the instrument workshop. Appendix D is a sketch of four pattern plates for stamping machines in the precision-drilling section of the instrument workshop. Appendix E is a sketch of a DAZ building with a "tower" about 60 meters high

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SCIENTIFIC/AIR/MILITARY

The D.A.Z. factory at DNEPROPETROVSKLocation, Name

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1. The D.A.Z. (Dnepropetrovsk Avto Zavod) factory was situated to the south of the city of DNEPROPETROVSK at the southern end of the Ulitsa Raboohaya and was surrounded by a high brick wall.

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History

3. Prior to conversion when the factory came under the Ministry of Defence, it was subordinate to the Ministry of Vehicles or Transport (or something similar) and was engaged on the production of "Ukrainets"

[] In 1948 only prototype models [] were being made 50X1-HUM and engines were supplied from MOSCOW. Just before conversion, series production of this type [] was started and when conversion 50X1-HUM actually began, only about 7 or 8 [] had been produced. These were taken over for use by the D.A.Z. and [] production ceased.

4. The first sign that conversion to military production was taking place was the removal of foreign and other workers, who were transferred to other factories in or near DNEPROPETROVSK. There

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appeared to be no particular discrimination in the case of the dismissed Soviet workers, since they included qualified and unqualified workers from all parts of the plant. It seemed rather that a certain quota of Soviet workers was dismissed in addition to the foreigners, but the total number cannot be specified. All those dismissed were replaced by Soviet workers including technicians, but it did not appear that the replacements were brought specially from other parts of the U.S.S.R. In fact, some of the new workers taken on had applied locally for work at the D.A.Z. Personnel offices.

5. [] the conversion of the D.A.Z. was completed over a period of 2 or 3 years, but this is only a rough calculation. 50X1-HUM
During this period new machinery was brought to the factory, such as lathes and milling machines, in civilian lorries from the MOSCOW factories where they had been made.

Production

6. Production of "Belarus" tractors commenced at the D.A.Z. about one year after production of "Ukrainets" [] had ceased, i.e. when 50X1-HUM
conversion to military production had already started.

7. At first prototypes only were manufactured in order to determine what jigs and tools would have to be set up for subsequent series production. The "Belarus" was quite a small agricultural type tractor, with two small wheels in front and two larger ones behind.

[] the whole tractor, including the engine, was built at 50X1-HUM
the D.A.Z. Workers employed at the D.A.Z. before conversion and some of those taken on afterwards were engaged on tractor production. [] 50X1-HUM

[] the tractors were [] 50X1-HUM
[] were destined mainly for "Kolhkozes". By the end of 1952 or the beginning of 1953 these tractors were in series production at the D.A.Z. and [] they were thereafter turned out at the rate of 50X1-HUM
300 per week. []

[] groups of tractors were also driven away from the factory under their own steam in the direction of DNEPROPETROVSK,

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presumably for shipment elsewhere.

9. [redacted] Dnepr refrigerators were made in factory No.
192 [redacted]

"Instrumentalny" Workshop

10. The "Instrumentalny" or Instrument workshop was located at No. 1 on the plan of the D.A.Z. lay-out attached at Appendix A. and consisted of a single-storey, brick building, measuring about 200 x 80 m. with a high two-pitch roof and a wooden parquet floor inside, which was always kept very clean. From the outside it looked like most of the other bays within the D.A.Z. complex.

11. During the period 1948 to 1953 this shop underwent no modifications, either structurally or internally, nor did its activities appear to change. The only exception to this was that the three main sections within the shop received the numbers 51, 52 and 53 after the conversion of the factory to military production. Both before and after conversion, the shop was generally referred to by the D.A.Z. workers as the "Instrumentalny Tsekh".

12. The lay-out of the building is shown on the plan at Appendix B. At one end (No. 3) there was a section 3 storeys high and about 20 m. wide, all three storeys being occupied by offices, including those of the Director, the D.A.Z. Administration and the Party. Access to this section was via two entrances at No. 2 on Appendix B., from which stairs led to the upper floors. At No. 1 was the main entrance to the shop at ground level. At No. 4 there were two small tool stores on the workshop floor, where tools for use in the shop were issued or exchanged over a counter at a window.

13. The Precision Drilling section (see below) was situated at No. 5, in a separate enclosure measuring about 25 x 15 m., surrounded by walls up to the roof and with windows on two sides. The Carpentry shop was at No. 7 and consisted of a brick enclosure measuring about 30 m. square.

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The rest of the floor space of the building was occupied by rows of lathes, milling, planing, polishing and non-precision drilling machines.

14. At Nos. 8 and 9 was another 3-storey section about 30 m. wide, access to which was gained by a stairway inside the shop. Part of this section at No. 9 was occupied by the offices of the shop management and the other part at No. 8 consisted of two canteens, one for the workers and the other for the management and officials. At No. 10 was the vehicle entrance and at No. 11 another door used for the disposal of workshop waste.

15. As already stated, the building contained three workshops numbered 51, 52 and 53, all of which were engaged on the production of tools for use in the factory and within the shop itself. One section made drills, varying in size from 10 mm. to 30 mm. in diameter for use in non-precision drilling machines. Another section made hand cutting tools for lathe operators as shown on Appendix C. A third section was engaged on finishing and polishing these tools, which were then supplied to the whole factory 50X1-HUM

Tool repairs and pattern production were also carried out in this building. The cutting edge of the hand tools for lathe operators was made of steel or widia ("vidia"). 50X1-HUM

Precision Drilling Shop

16. This was situated at No. 5 on Appendix B. and was equipped with 7 or 8 drilling machines of different sizes and makes. 50X1-HUM
three of one of Czech, one of Hungarian and one of 50X1-HUM
manufacture, and all were in use in this section from 1948 until at least 50X1-HUM
summer 1953. One other machine, delivered in 1949, had been specially
made in and bore Russian wording together with an origin mark 50X1-HUM
SIP in capital letters inside a large capital C. The precision drilling
work required very accurate measuring, which was carried out by means of
adjustable hand measuring instruments, except in the case of the largest
drilling machines which were equipped with 50X1-HUM
optical measuring instruments.

17. Previous to conversion, work within the precision drilling section had been distributed by one of the drillers themselves, but this was

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found to be too great a waste of skilled labour time, so a foreman was brought in for the purpose. His name was SUEV and his duty was to distribute the work every day to the drillers.

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18. Precision drilling was carried out on various shapes and sizes of pattern plates for stamping machines, as illustrated at Appendix D. All drillers worked on the same type of pattern plates and there was no change in their shape or design during the period 1948 to 1953. The foreman in charge used to issue the plates, which always consisted of a set of two, together with a scale drawing showing the exact position at which the holes were to be drilled and the measurements involved.

19. The sets of rectangular plates (No. 1 on Appendix D.) were of various sizes, the smallest being about 30 cms. long and the largest about 60 cms., there being several sizes in between. Only two holes were drilled in the smallest plates at opposite corners, one about 20 mm. in diameter and the other about 30 mm. On the larger plates four holes were drilled, one at each corner, the two larger being about 60 mm. in diameter and the smaller about 50 mm. [redacted] the different sizes of holes enabled the plates to be matched up correctly in position on the stamping machines. The smaller plates were each about 20 mm. thick and the largest about 50 mm. They were made of both steel and cast iron and had been through a previous polishing process before being passed on to the drillers.

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20. The plates at No. 2 on Appendix D. were of both steel and cast iron, but seemed to be of one standard size only and about 40 cms. long, although they came in different thicknesses, the same as those at Nos. 1 and 2.

21. The majority of plates drilled in this section were of the shape shown at No. 3 on Appendix D. and they were always of cast iron. As a result, quite a large proportion cracked while being drilled. They were of different sizes, the smallest being about 20 cms. across at their widest point and about 30 mm. thick, while the largest were about 50 cms. across and 50 to 55 mm. thick. The distance between the centres of the holes drilled in the "ears" varied from 20 mm. up to 400 mm. in the largest.

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22. The circular plates shown at No. 4 on Appendix D. were of two or three different sizes, having a diameter of 40 mm, 60 mm. and 65 mm.,

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They were all .5 mm. thick and all had T-shaped pieces out out round the outside edge as shown on the sketch. These plates had a small round hole drilled in the centre by the precision drillars.

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23. It took each driller from 2 to 3 hours to complete the work of drilling holes in each set of plates. Prior to being received in the precision drilling section, the plates were prepared by fitters and came from somewhere else in the factory. patterns were out in the plates after they left the precision drilling section and the plates were subsequently used in stamping machines in some other part of the factory for the series production of components. compared the process to that used in the large scale production of parts for motor cars.

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24. The "Instrumentalny" shop had no store of raw materials, which were brought in as and when required unloaded at the door at No. 10 on Appendix B. Raw materials consisted of iron bars of all sizes for use by the lathe operators and also steel sheet of all sizes up to about 1 m. square. The sheet was of various thicknesses up to about 5 cms. and those which were too heavy to work with, were cut into more manageable sections with a blow lamp. The materials were moved round the shop on small lift trucks.

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Other Buildings in the D.A.Z. Plant

25. Next to the "Instrumentalny" shop at No. 2 on Appendix A. was another building of approximately the same size, which was started in 1954, but work had apparently been abandoned on it, because by the summer

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of 1959 it had still not been completed. All that could be seen was the metal framework of the building without roof or walls, although the shape of the roof structure suggested that it was designed to be flat.

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there had been no signs of activity there for quite a time prior to the summer of 1959.

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26. At No. 3 on Appendix A. there was another shop, similar in shape and size to the "Instrumentalny", construction of which was begun in 1949 or 1950. Next to it at No. 4 there were 5 or 6 smaller shop measuring about 100 x 30 m. and 2 storeys high, built between 1952 and 1953. They were all of brick with double-pitch roofs. This collection of buildings^{was}/situated about 80 m. from the boundary wall enclosing the factory and there were trees planted in the intervening space.

27. At No. 5 there was a building, construction of which started in 1950 or 1951 and was apparently completed by the summer of 1953. A sketch of the building is attached at Appendix E. It consisted of one section measuring about 120 x 60 x 25-30 m. high with a double-pitch roof and a second section at the eastern end in the form of a "tower", measuring 30 x 60 m. and rising to a height of about 60 m., or about twice the height of the first section. This "tower" had a flat roof. The whole construction was of brick and on three sides of the tower there were about 5 rows of windows, each apparently corresponding to one floor inside the building. There were also windows in the lower part of the building and the "tower" section could be seen from outside the factory.

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28. There was a collection of buildings still under construction in the summer of 1953 at No. 6, and at No. 7 another building about 250 m. long with many windows in it, which gave the impression of being longer and lower than the majority of shops within the D.A.Z., all of which seemed to be of similar design. There were no other shop between No. 7 and the factory entrance at No. 8, this area being occupied by an open space planted with trees.

29. At the southern end of the building at No. 7 there were two round cooling towers and 3 or 4 tall chimneys at No. 10.

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30. The vehicle entrance at No. 11 was used by tractors when being driven away from the plant and [redacted] the tractors were produced in the shop at No. 3.

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Buildings outside the D.A.Z. Plant

32. Dwelling houses for D.A.Z. workers were situated immediately to the north of the plant on both sides of the Ulitsa Rabochaya. They consisted of 3 or 4 storeyed blocks, each measuring about 70 x 15 m. and each block having 6 entrances and comprising about 48 flats. Some of the blocks were completed in 1949 and D.A.Z. workers moved in immediately. Others were still under construction at that time, but the whole housing estate in this area was finished and fully occupied by 1952.

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[redacted] a total of between 10,000 and 15,000 people were accommodated in these buildings and they were all D.A.Z. employees and their families. Other D.A.Z. workers lived in DNEPROPETROVSK or elsewhere. In the area at No. 12 on Appendix A. construction of further dwellings for D.A.Z. workers was commenced in the summer of 1959.

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33. At the end of block No. 13 a civilian Post Office was opened in 1949 or 1950. The Personnel Office of the D.A.Z. situated at No. 14 continued there until at least the summer of 1959. Applications to work in the D.A.Z. were made to this office and workers also had to sign secrecy undertakings here, after the plant had been converted to military production. At No. 15 were the offices of "Trest 17", which had previously been housed in the area at No. 16 (date unknown). The collection of small houses at No. 17 had nothing to do with the D.A.Z.

34. The D.A.Z. Hospital was at No. 18 on Appendix A. and the Out-Patients department at No. 19 on the Parkovaya, a short distance from the boundary wall of the factory. At No. 20 was a large Hospital for railway workers.

35. The Sports Arena at No. 21 was used by the factory football team.

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SECRETAddresses

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36. Up to the latter half of 1958 or the beginning of 1959 no street names were used in this newer part of the city of DNEPROPETROVSK. Houses were referred to by their corresponding number followed by the district only. For instance the D.A.Z. houses were in the Niezny Posiolok and were therefore known by their number, such as 4, followed by Niezny Posiolok only. At about the time mentioned above, the system was changed and the streets were given names, so that addresses henceforth bore the street name and the number as usual.

Noises

37. [] first heard noises coming from inside the D.A.Z. plant 50X1-HUM at some time after the building situated at No. 5 on Appendix A. had been 50X1-HUM completed, i.e. latter half of 1953. [] noises [] sounding like those emitted by a very powerful engine. They started on a 50X1-HUM low note, which continued for just under 30 seconds and then rose to a very high, unpleasant whine, which was held for a few seconds only and then the noise ceased altogether, having lasted for a total of approximately 30 seconds.

38. When the noises were in progress windows rattled in the D.A.Z. dwelling houses, but the earth did not shake. The noises always seemed to emanate from the area at No. 5 and at night a bright glare appeared, which seemed to be concentrated over this area. It was light red in colour and appeared to extend upwards to a height of about 150 m. The glare was accompanied by some thin smoke and both the glare and the smoke disappeared as soon as the noise ceased. The noise could be heard in the town of DNEPROPETROVSK, but not very loudly.

39. The noises occurred on an average about twice every 24 hours, except on Sundays, nearly always at night but sometimes once during the day and once at night. This pattern frequency of the noises was maintained between 1953 and the summer of 1959 [] 50X1-HUM

40. No explanation was given to the workers to account for the noises, nor were any special precautions taken before, during or after them.

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The workers did not discuss the subject or enquire into it in any way, in case they should be considered unduly inquisitive.

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Electricity Supply

45. [redacted] power was brought to the factory from ZAPOROZHE on steel pylons [redacted]

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46. [redacted] light and power within the plant and the D.A.Z. workers' dwellings were supplied at 220 v. Other houses in the area, which did not belong to the D.A.Z., were supplied with 127 v.

/Labour

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Labour

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47. [redacted] up to the time of conversion, there were between 15,000 and 20,000 workers employed in the D.A.Z. After conversion this number was greatly increased, until in 1959 there were between 30,000 and 40,000 workers there.

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48. Soon after conversion a notice appeared outside the D.A.Z. Personnel office at No. 14 on Appendix A. offering vacancies to lathe operators and milling machine operators. As a result long queues of applicants could be seen waiting outside the office, but in 1956 or 1957 this notice had been removed and the queues of applicants consequently disappeared. [redacted] the D.A.Z. had reached its full complement of machine operators at that time.

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49. About 500 or 600 workers were employed in the "Instrumentalny" shop and, although some were dismissed on conversion, they were subsequently replaced so that the total number remained about the same as before. Two shifts were worked, one from 7 a.m. to 4 p.m. and the other from 4 p.m. to midnight. Although there was no official night shift, workers sometimes had to stay on or come in after midnight if specially required to do so. Lunch hours were staggered as the canteen was not large enough to accommodate one whole shift. Workers' pay was distributed twice a month in the shop itself.

50. All D.A.Z. employees started work at 7 a.m. except for technicians and office workers, who started at 8 a.m.

Security

51. Security at the D.A.Z. was strict both before and after conversion. Guard duties were carried out by civilian "Okhrana" guards up to the time of conversion, but after that military guards took over. They wore khaki military uniforms, red cap bands and carried rifles.

52. There were guard towers along the north and east walls of the factory and [redacted] there were also towers along the other two sides.

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53. When workers entered the gate at No. 8 on Appendix A. their passes were checked by the guards. The passes were made of blue

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cardboard folded in two with no markings on the outside. Inside they carried the name of the worker, his photograph and the number of his workshop, so that each worker was only authorised to enter the shop corresponding to the number on his pass. On leaving employment at the D.A.Z., the workers had to hand over their passes to the Personnel office. 50X1-HUM

Fire Precautions

54. No instruction was given, nor were any special precautions taken against the risk of fire and smoking was permitted in the "Instrumentalny" workshop. [redacted] there was a fire station equipped with several fire engines within the factory complex and [redacted] it was located somewhere near the entrance at No. 22 on Appendix A. against the east wall. 50X1-HUM 50X1-HUM 50X1-HUM

Air-Raid Precautions

55. [redacted] lectures on civil defence were not given to the D.A.Z. workers and [redacted] no [redacted] air-raid shelters within the plant premises. 50X1-HUM 50X1-HUM

Personalities

56. The Chief Engineer at the D.A.Z. was GREGORIEV (f.n.u.), who became temporary Director just after the conversion to military production, but who left probably not more than a few months afterwards. The new Director was SMIRNOV (f.n.u.) and he was believed to have continued in this post until at least the summer of 1959.

Visits

57. Regular visits, probably about once a week, were made to the D.A.Z. by Soviet Air Force officers in uniform, sometimes in a group of 3 and sometimes singly. The officers were usually of Lieutenant rank. 50X1-HUM

[redacted]
[redacted] The Air Force officers went to the Director's office situated in the "Instrumentalny" shop building and usually stayed all day at the factory. [redacted] 50X1-HUM

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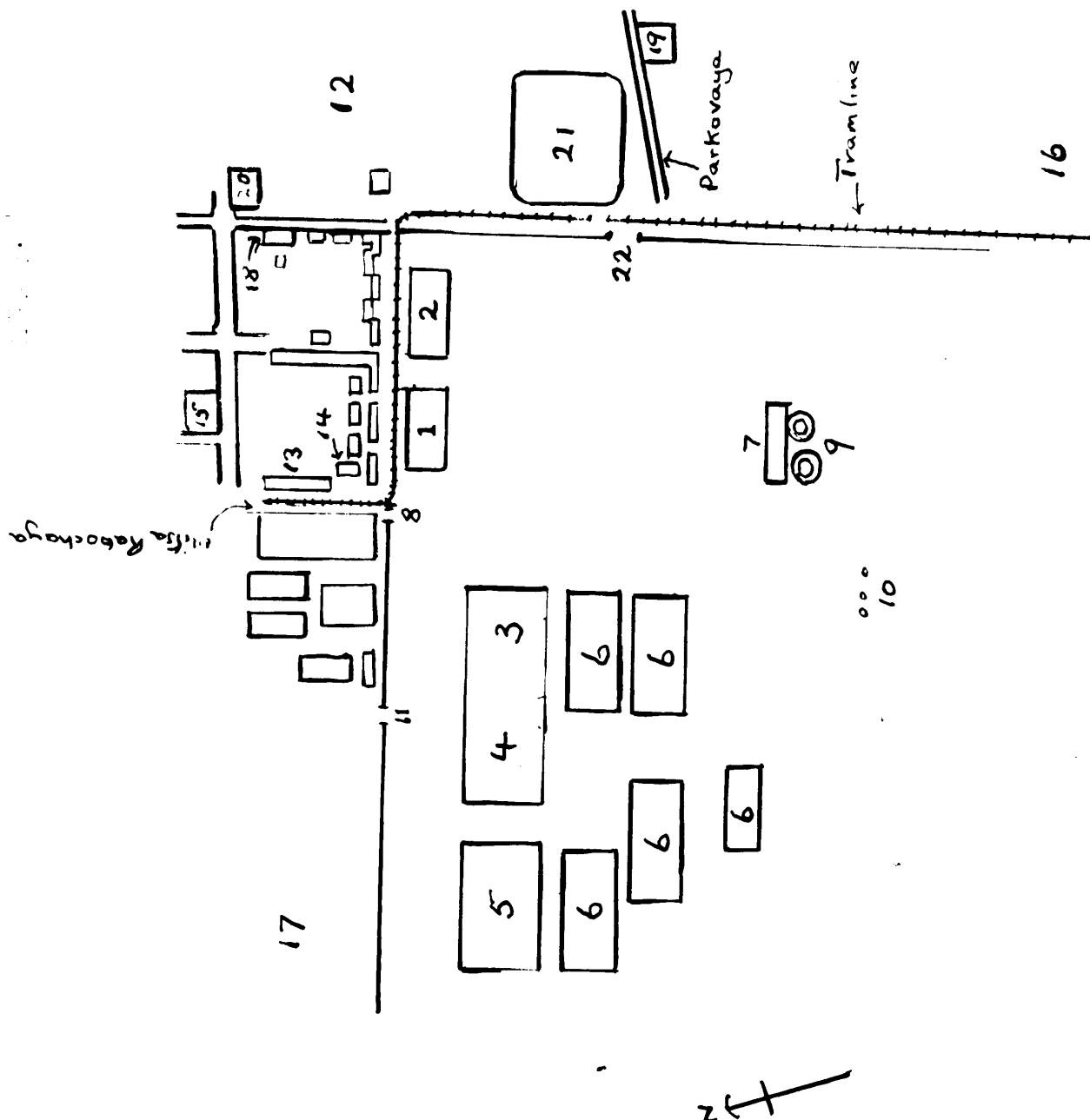
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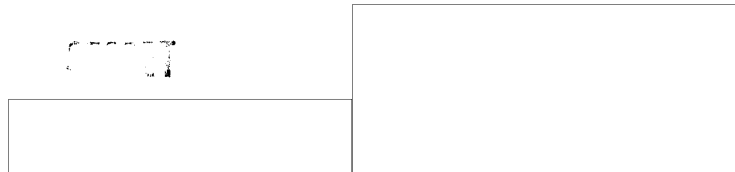
KEY TO APPENDIX A.

1. "Instrumentalny" workshop
2. New building (construction apparently abandoned)
3. Workshop about same size as "Instrumentalny"
4. Group of smaller workshops
5. Building with "tower"
6. Group of buildings
7. Long, low building with many windows
8. Workers' entrance
9. Two cooling towers
10. Chimneys
11. Lorry entrance
12. Area where new D.A.Z. houses being built in 1959
13. D.A.Z. housing block in which Post Office was situated
14. D.A.Z. Personnel offices
15. "Trest 17" offices
16. Area where "Trest 17" offices previously located
17. Collection of houses not connected with D.A.Z.
18. D.A.Z. Hospital
19. D.A.Z. Out-Patients Clinic
20. Hospital for railway workers
21. Sports' Arena
22. Entrance to D.A.Z.

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KEY TO APPENDIX B.

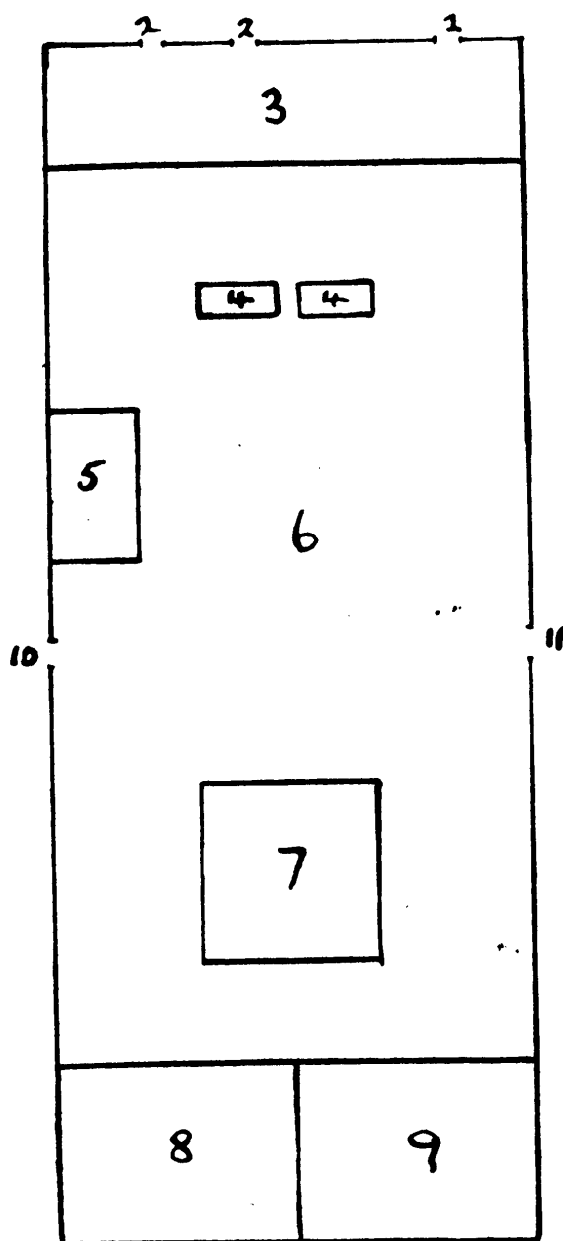
1. Workers' Entrance to shop
2. Entrance to offices of Director, Party, etc.
3. Offices
4. Tool issuing counters
5. Precision Drilling section
6. Floor of "Instrumentalny" shop
7. Carpentry shop
8. Canteens
9. Workshop Management offices
10. Entrance used by larries
11. Door for disposal of workshop waste.



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APPENDIX B.

"Instrumental" Shop



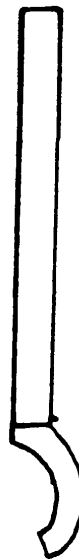
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APPENDIX C.

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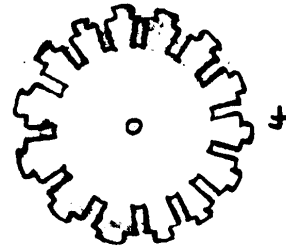
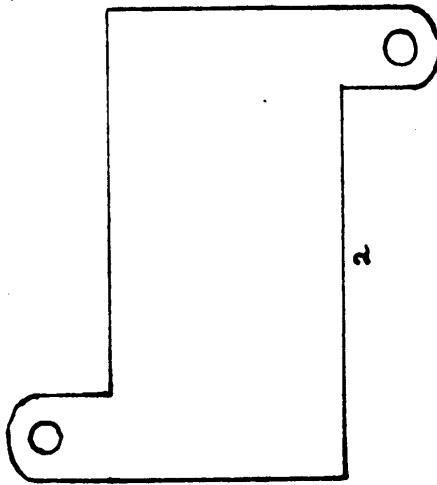
Hand cutting tools



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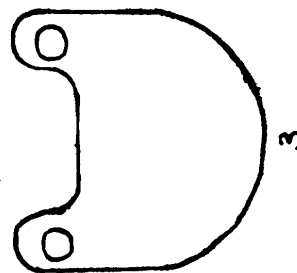
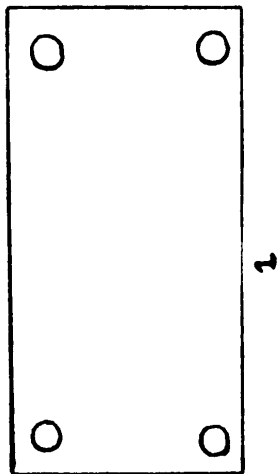


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APPENDIX D.

Pattern Plates



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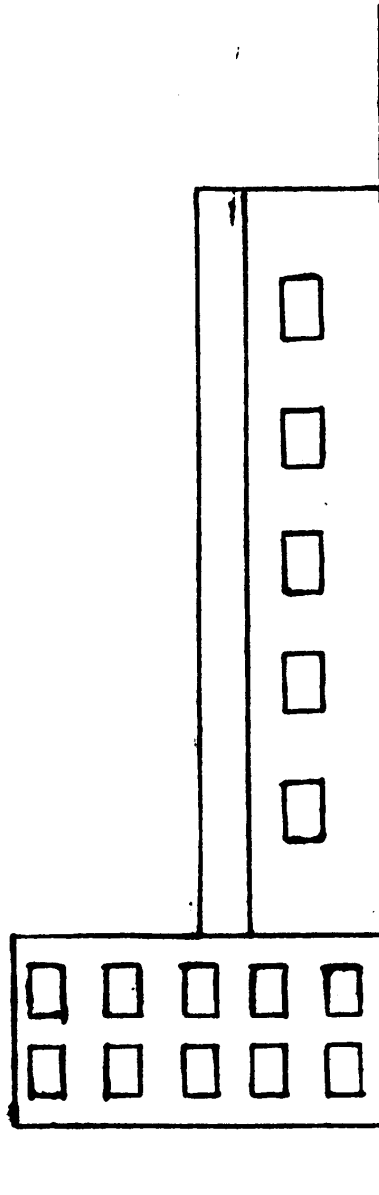


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APPENDIX B.

"Tower" Building



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